

Picea mariana

FIELD BOTANISTS OF ONTARIO

ISSN: 1180-1417

NEWSLETTER

Winter 1993
Volume 6(4)

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LICHEN WORKSHOP

THERE WILL BE A LICHEN WORKSHOP on MAY 14-15, 1994
at LAURENTIAN UNIVERSITY, SUDBURY

Further information and an application form are enclosed with this newsletter.

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A CALENDAR OF FIELD EVENTS FOR 1994
AND A FIELD TRIP APPLICATION FORM
WILL BE ENCLOSED WITH THE NEXT NEWSLETTER.

Contact Irene McIlveen (519)-853-3948 for further information.

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THE FBO ANNUAL GENERAL MEETING WILL BE HELD THE WEEKEND OF
AUGUST 6-7 at WYE MARSH

**NEWSLETTER**

Published quarterly by the FBO
ISSN: 1180-1417

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ILLUSTRATIONS

The drawings in this issue of the newsletter are by Bob Bowles, Jane Bowles and Irene McIlveen.



TRIP TO GARDEN PLAIN ALVAR

A group of 19 field botanists met at the lift locks at Kirkfield, Ontario for a trip to the Carden Plain Alvar on June 12, 1993. The trip was arranged and lead by Bob Bowles. The purpose of the trip was to look at the flora of the large area of limestone alvar in the area. The trip made a circuit of an area generally to the north of Kirkfield.

The trip consisted of seven stops that could be divided into three categories. Four were roadside stops, which permitted us to appreciate the expanse of large alvar fields, and included an introduction to some of the local plant species. The fields were largely open areas which are now mainly used as pasture because the soil forms only a very thin layer over the limestone bedrock. Certain areas were very flat while others were gently rolling. Some fields have been allowed to revert to old field communities with Hawthorn. This type of habitat is selected for breeding by the endangered Loggerhead Shrike and the Carden Plain is one of the two areas in Ontario where this bird breeds in any number at all. (We did not see any shrikes during the trip but it was reported that some participants who went back to one area were fortunate to see one.)

Some places are seasonally under water (spring), but for most of the growing season, the area is very dry and presents a habitat that supports only plant species specialized for such conditions. One site was permanently wet and supported a number of wetland species including White Water Buttercup (*Ranunculus longirostris*). Marsh Wrens were easily heard and occasionally they came out where we could see them. The remaining two stops were at fields that had partial woody cover but were also used for pasture. One of these showed clearly the limestone pavement that is characteristic of alvars and it was here that the greatest amount of time was spent. A good growth of the lichen *Cetraria arenaria* was noted on the ground surface. It was dry and crisp and waiting for the next good rainfall to commence growing again.

The plant species that most identified or symbolized the alvar was Prairie Smoke (*Geum triflorum*). This was represented as single plants, but was more often present in patches, some of which covered large areas and gave

the fields a soft, billowing surface. Some other plant species characteristic of such habitats were also found to be common at the sites visited. The most colourful of these were Balsam Ragwort (*Senecio pauperculus*) which provided a bright yellow layer across many of the fields. Indian Paintbrush (*Castilleja coccinea*) punctuated the area with some extra colour. Less conspicuous, but no less beautiful, were Thyme-leaved Sandwort (*Arenaria serpyllifolia*), Rock Sandwort (*Minuartia michauxii*), Rock Cress (*Arabis hirsuta*) and Bluets (*Hedyotis longifolia*).

Bob Bowles provided the participants with plant lists he had developed from species encountered in the area on previous visits. During the trip, we were able to add 14 new species to the previous lists. These were Scouring-rush (*Equisetum hyemale*), Marsh Fern (*Thelypteris palustris*), the sedges *Carex granularis*, *C. lacustris* and *C. stricta*, Tall Wormseed Mustard (*Erysimum hieraciifolium*), Dotted Hawthorn (*Crataegus punctata*), Smooth Sumac (*Rhus glabra*), Bittersweet (*Celastrus scandens*), Common Buckthorn (*Rhamnus cathartica*), Willowherb (*Epilobium parviflorum*), Upright Bindweed (*Calystegia spithamea*), Hawkweed (*Hieracium caespitosum*) and Purslane Speedwell (*Veronica peregrina*). For the most part, these species are not particularly rare or unusual, but their discovery shows that more botanical eyes do provide an advantage in discovering flora from any particular site.

Well represented in the alvar flora were the cinquefoils. Five species were seen: Silvery Cinquefoil (*Potentilla argentea*), Tall Cinquefoil (*P. arguta*), Shrubby Cinquefoil (*P. fruticosa*), Rough Cinquefoil (*P. norvegica*) and Rough-fruited Cinquefoil (*P. recta*). Also well represented were members of the genus *Rhus*. These included Smooth Sumac (noted above), Fragrant Sumac, (*Rhus aromatica*), Poison Ivy (*R. radicans*) and Staghorn Sumac (*R. typhina*).

Some other species noted were Rock Spikemoss (*Selaginella rupestris*) Poverty Grass (*Danthonia spicata*), Milk Vetch (*Astragalus canadensis*), Golden Corydalis (*Corydalis aurea*), Alder-leaved Buckthorn (*Rhamnus alnifolia*) and Early Saxifrage (*Saxifraga virginensis*). It was unexpected that Sheep Sorrel (*Rumex acetocella*), a species normally associated with acid soils, was so common in

an area that was dominated by limestone. At one site, we were shown a dwarfed form of serviceberry known as Alderleaf Juneberry (*Amelanchier alnifolia* var. *compacta*). Both subspecies of Purslane Speedwell (*Veronica peregrina* ssp. *peregrina*) and (*V. peregrina* ssp. *xalapensis*) were found, the latter in a shallow pool of water. The presence of two *Geranium* species - Bicknell's Geranium (*Geranium bicknellii*) and Carolina Cranesbill (*G. carolinianum*) at one spot lead to much discussion on how to separate the two species.



Hedyotis longifolia

My incidental list of butterflies and moths includes 11 species of which Inornate Ringlet (*Coenonympha inornata*) and Tiger Swallowtails (*Pterourus glaucus*) were most common and added to an already delightful day. On behalf of the trip participants, I would like to say a heartfelt thank you to Bob Bowles for leading a most interesting trip. Permission from local land owners to enter onto their private property was also much appreciated.

W.D. McIlveen

OPINICON BARGE AVAILABLE

The barge owned by Queen's University Biology Station, and used during the FBO aquatics field trip at Lake Opinicon last summer, is available for rent by groups working in the Rideau System.

The boat is a 9.75 m steel pontoon barge with an inboard-outboard engine, 28 m² of canopied deck space, and a capacity of 3628 kg. There is a swim ladder, a swim platform, safety railings and a VHF marine radio telephone. The barge can be easily transported within the Rideau system.

For more information call Frank Phelan at 613-359-5629.

GIFTS FROM THE OTHER SIDE

While watching an excellent amateur photographer painstakingly capture another image of Ram's Head Orchid on Valcour Island, N.Y., it occurred to me that there must be many excellent private slide, photograph or botanical artifact collections whose futures have not been secured via wills or bequests.

There are many institutions: museums, universities, high schools and/or public schools who would be very pleased to receive the donations of such educational material together with explanatory field notes and/or identifications. If you have such a collection that you would be willing to donate, please make your wishes known accordingly. Most institutions will require clear title to the material, including copyright, so ensure that no family members will regret the donation. In making such a bequest, not only are you making your material available as teaching aids for future botanists, but also providing the institution of your choice with a potential for revenue generation.

While working on an exhibit recently for the Royal Ontario Museum we required slides illustrating seeds of a wide variety of tropical trees. Such a bequest gave us access to excellent images that would have been prohibitively expensive to buy. The photographer is always given appropriate credit in addition to our appreciation for such a generous gift.

Dale Hoy

CAVAN BOG - REVEGETATION SURVEY

In June 1993, the scheduled FBO field trip to Cavan Bog was cancelled when members of the executive were made aware of the recent changes to the bog, and of the on-going revegetation study at the site. The following report prepared by Roger Jones *et al.* outlines the situation that exists at the Bog. It should indicate that the FBO executive made a correct and responsible decision in cancelling the field trip in that further stress to the bog from human visitors was avoided.

A study of revegetation of part of Cavan Bog

Roger Jones, Kate Frego
and Rosita ben Oliel
Department of Biology
Trent University, Peterborough

In late winter 1992, clearing of trees and shrubs for construction of a hydro line began along a right-of-way through Cavan Swamp, a 1,300 ha Class 1 Wetland near Peterborough. This right-of-way included part of a 3 ha quaking bog known as Cavan Bog which is a component of the wetland. When the Otonabee Region Conservation Authority (ORCA) became aware of the cutting, they requested that it cease but, by that time, 80 to 90% of the right-of-way had been cleared, including part of the quaking bog. Most trees and brush were burned on site.

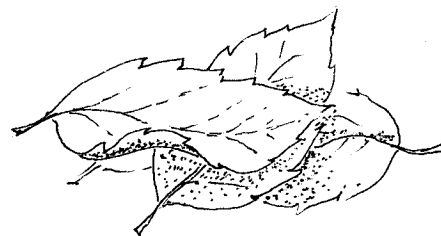
This was not, however, the first time Cavan Bog had been perturbed. There was an attempt in the 1950's to construct a road on top of an existing corduroy road through the bog. The road sank, leaving an elongated stretch of open water.

The exceptional nature of the bog was brought to the attention of naturalists in 1929 by Frank Morris when he wrote about the unusual number of species of orchids growing there (Morris and Eames, 1929). Hannah (1984) suggested that the Cavan Bog be a candidate nature reserve and the Ontario Ministry of Natural Resources designated the bog as a Life Science Area of Natural and Scientific Interest (ANSI) in 1985.

In May 1992, a study of vegetation recovery using permanent quadrats was initiated along the clear cut area. Little information is known about vegetation recovery in bogs from this kind of disturbance. The light and temperature regimes for surviving plants have been drastically altered and ash from the burn piles has created many localised "hot spots" of increased mineral nutrients. Tree removal also opened up the fragile bog habitat to the detrimental impacts of trampling. The long term objective of our study is to monitor the effects of the tree and shrub clearance and burning on vegetation recovery and soil chemistry. It quickly became apparent in summer 1992 that seedlings of opportunistic weedy species with air-borne seeds were establishing in ash where logs and brush had been burned. Burned area soils exhibited higher water soluble potassium, calcium and magnesium concentrations than non-burned soils. In addition, the species list for the bog has been expanded to include more species that are uncommon in southern Ontario, e.g. *Moneses uniflora* (One-flowered Pyrola). During the summer of 1993, the influx of weed species continued but the appearance of numerous conifer seedlings was also noted. It will be interesting to see whether these "non-bog" species persist or are replaced by those that previously characterized the bog.

References:

- Hannah, R. 1984. Life Science Areas of Natural and Scientific Interest in Site District 6-8 - A Review and Assessment of Significant Natural Areas in Site District 6-8. Parks and Recreation Areas Section, Central Region, Ontario Ministry of Natural Resources.
- Otonabee Region Conservation Authority Report. 1964. The Cavan Bog, pp. 56-59.
- Morris, F. and Eames, E.A. 1929. Our Wild Orchids. Charles Scribner's Sons, New York.



ASTERS AND GOLDENRODS

"It was the best of times, it was the worst of times..." I realize that Dickens got to that line first, but after two days with Dr. John Semple from the University of Waterloo it aptly describes the state of composite taxonomy right now. We currently know more about their relationships, thanks to modern biochemical techniques, but we may be poised on the brink of a major reclassification that could completely redefine the concept "Aster".

The 25 participants converged on Long Point on a breezy, bright September 11 morning. Although Dr. Semple expressed incredulity at such a group actually paying to hear him expound on his passion, he was clearly delighted to do so.

We started off with a modest group of *Aster pilosus* (Hairy Aster) near the parking lot, but we were soon mentally globe-trotting, trying to keep up with the plethora of U.S. and European relatives. As with the willows, each species clearly has its own character, a suite of traits that makes it unique and recognizable from a car at 100 kph! Hmm... Perhaps we should slow down a little.

A trip to a Long Point meadow in autumn is truly a treat with *Bidens coronata* (Southern Tickseed) and *Helianthus* spp. (Sunflowers) in full bloom among the gracile *Sorghastrum nutans* (Indian Grass), and a couple of bikers who wouldn't stop to admire the *Euthamia graminifolia* (Grass-leaved Goldenrod) and *Solidago ohioensis* (Ohio Goldenrod). Chemically speaking, these two are very distinct, however much they resemble one another superficially. One of the most diagnostic characters used to discriminate *Solidago* and *Aster* is that golden colour, but in fact there are yellow Asters (*Aster heterotheca*) and white Goldenrods (*Solidago bicolor*). However, the chloroplasts and glandular leaf structures of *Euthamia* clearly set it apart in its own genus. We also compared *Solidago altissima* (Tall Goldenrod) with *S. canadensis* (Canada Goldenrod) and *S. gigantea* (Late Goldenrod).

There followed a discussion on the relationship between morphology and ploidy level (how many sets of chromosomes in a cell - 2, 4, 6 or 8 or more!) Then on to the rare *Aster dumosus*

(Bushy Aster) and common *Aster lanceolatus* (Panicled Aster).

The fact that it was already lunch time attests to the depth of Dr. Semple's discussions on the expenses of modern cytotaxonomy, publishing dilemmas and concepts in gene-splicing. Novices in the group may have been challenged by some of the technical detail, but on the whole it was well received.

After lunch on the sand (junk food 1, health food 25), we proceeded in convoy to Backus Woods. There we looked at *Aster cordifolius* (Heart-leaved Aster) and the related *Aster urophyllus* (Arrow-leaved Aster).

At the site of New England Aster (*Aster novae-angliae*), Dr. Semple launched into an in-depth justification for its removal from the genus *Aster*. With its glandular hairs, camphor-like scent and dry habitat it is quite distinct from the similar *Aster puniceus* (Purple-stemmed Aster).

We walked past *Cornus florida* (Flowering Dogwood), *Sassafras albidum* (Sassafras) and *Liriodendron tulipifera* (Tulip-tree) (!) to examine *Solidago patula* (Rough-leaved Goldenrod), which Dr. Semple transformed into a model of *S. ulmifolia* (Elm-leaved Goldenrod) by trimming the inflorescence and removing the basal leaves. Bill McIlveen even turned up the halophyte, *Aster brachyactis* (Rayless Aster) from his pocket!

A quick stop on the way back to Waterloo for *Aster oolentangiensis* or Azure Aster, then we headed for dinner.

The evening lecture dealt largely with the evolution of the composites and how the Asters are related to each other. This ongoing process of discovery has led Dr. Semple to remove *Virgulus* from *Aster* and that may only be the beginning. As gene research proceeds, it may be that more genera will be split off and *Aster sensu stricto* may become a relatively small group.

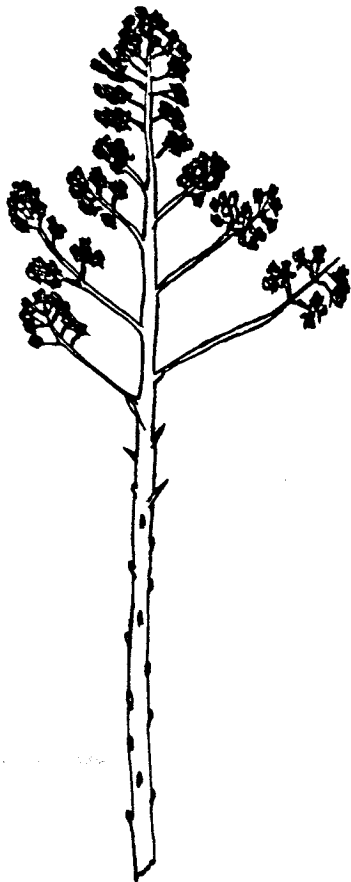
Most of the group stayed to visit the herbarium and practice using the keys with the material Dr. Semple had brought from his garden and from the University of Waterloo Herbarium.

The workshop reconvened Sunday morning in

the greenhouse, under threatening skies outside. There we looked at representatives from all over the world including examples of intermediate plants that blurred the lines between *Aster* and *Erigeron* or *Aster* and *Solidago*. Although some people found standing still for so long a challenge, the eclectic questions that ranged from ethnobotany to classification systems, and white flies to French universities (you had to be there) kept the discussion interesting.

After a leisurely lunch at Pizza Hut we visited the University of Waterloo Ecology Garden, which at this time of year was radiant with Goldenrods, Asters and *Silphium terebinthinaceum* (Prairie Dock) in full bloom. In addition to discerning among the species at hand we indulged in speculation about the genetic engineering at Jurassic Park, post-glacial Ontario colonization patterns, post-Columbian influences on Hungarian and Italian cuisine..... (fade to black).

Dale Hoy



Spirea alba

HENDRIE VALLEY AND OAKVILLE CREEK

This field trip, held on Saturday, August 25, 1993, was part of the FBO Annual Meeting weekend. Our leader Dr. William Crins promised that we would see something even more pervasive than Purple Loosestrife (*Lythrum salicaria*) as well as hundreds of a plant found only in two locations in Ontario. The latter plant, we were told, grows up to 2.5 m tall, and is so distinctive that one common name for it is Monument Plant. Some trip participants had driven great distances to be shown this plant, so our leader decided to keep it to the end.

During the day we visited four spots in Halton County. Bill Crins is from the Hamilton-Burlington area and spent many of his formative years studying plants in Halton County. First we walked across Plains Road from the Royal Botanical Gardens parking lot and entered Hendrie Valley, an R.B.G. property. At this point Hendrie Creek has cut into the underlying Queenston Shale creating some steep and sheltered slopes.

A list of some the plants observed here includes Summer and Riverbank Grapes (*Vitis aestivalis* and *V. riparia*), Cup Plant (*Silphium perfoliatum*) which is possibly introduced here, Pointed-leaved and Showy Tick Trefoils (*Desmodium glutinosum* and *D. canadense*), Dryland Blueberry (*Vaccinium pallidum*), Horse Balm (*Collinsonia canadensis*), Hog-peanut (*Amphicarpaea bracteata*), Groundnut (*Apios americana*), Purple Touch-me-not (*Impatiens glandulifera*) which has a long flowering season and is loved by bees, Honewort (*Cryptotaenia canadensis*), Nipplewort (*Lapsana communis*), Rough Hedge Nettle (*Stachys hispida*), Poke Milkweed (*Asclepias exaltata*) and White Vervain (*Verbena urticifolia*).

We encountered a variety of members of the Urticaceae including Clearweed (*Pilea pumila*), Wood Nettle (*Laportea canadensis*) and Stinging Nettle (*Urtica dioica* ssp. *gracilis*). *Pilea pumila* can be distinguished from the much rarer *P. fontana* by the achenes which are smaller and yellow (not purple) in *P. pumila*. Based on much painstaking personal research our leader has determined that *Laportea canadensis* is even more urticating than *Urtica dioica*. There are two subspecies of *Urtica*

dioica found in Ontario; *Urtica dioica* ssp. *dioica*, the Eurasian introduction and *Urtica dioica* ssp. *gracilis*, the native subspecies which can be identified by its narrower leaves.

We were able to review a number of interesting grasses. Canada Brome (*Bromus pubescens*) is a good woodland indicator. A southern species, it likes dry areas, compared with Tall Brome (*B. latiglumis*) which is generally found in moist places. Virginia Wild-Rye (*Elymus virginicus*) was on the flood plains. White Grass (*Leersia virginica*) is a southern species of cut grass. *Leersia* has no glumes and the lemmas are half moon shaped. Autumn Bent Grass (*Agrostis perennans*), a woodland plant not common further north, has a big "flag leaf". In the open, it is large and robust, but in the shade here it was weak and delicate.

At the edge of Grindstone Creek we observed Muhly Grass (*Muhlenbergia frondosa*). It has a bushy branching inflorescence with prominent awns. The culms are bluish and very smooth. Fowl Manna Grass (*Glyceria striata*), the smallest and commonest *Glyceria* has bright green rounded leaves which create a ladder-like effect. Certainly the rarest grass we saw was Walter's Barnyard Grass or (*Echinochloa walteri*). Bill then showed us Rough Manna Grass (*Glyceria maxima*). This naturalized grass grows more than 2 metres tall, even bigger than the native Tall Manna Grass (*G. grandis*). It has wide leaves like a Cattail (*Typha*) and has essentially replaced the cattails in Cootes Paradise Marsh in Hamilton.

Another graminoid noted on the path was Path Rush (*Juncus tenuis*). To distinguish this species from Dudley's Rush (*J. dudleyi*), you need to look at the ligules. *J. dudleyi* has firm, persistent auricles at the top of the leaf sheath: in *J. tenuis* they are more tenuous.

In the afternoon we explored the slopes of Oakville or Sixteen Mile Creek. Where the creek intersects the old Lake Iroquois shoreline, the red Queenston Shale was again exposed. Under a large clump of Chinquapin Oak, (*Quercus muehlenbergii*) we found a number of prairie species. Among the Oaks were also Yellow Pimpernel (*Taenidia integerrima*), Sicklepod (*Arabis canadensis*), Three-seeded Mercury (*Acalypha rhomboidea*) and Little Bluestem (*Schizachyrium scoparium*). Other plants observed here included Tall Goldenrod

(*Solidago gigantea*), which is distinguished from *S. canadensis* by the very smooth, glaucous stem. New Jersey Tea (*Ceanothus americanus*), Snowberry (*Symphoricarpos albus*) which varied from ankle height to shoulder height, and Heart-leaved Aster (*Aster cordifolius*) with purple-tipped phyllaries, were also seen.

Our leader then escorted us to what was to be the real trip highlight - the largest, and one of only two extant populations of American Columbo (*Frasera caroliniensis*) in Canada. This plant is a fascinating member of the Gentianaceae. It a monocarpic perennial in which there is synchronous flowering only in certain years. The last big flowering year for this population, south of Waterdown, was 1990. At the last count there were at least 50 flowering individuals and 1000 smaller rosettes. We were told that the best time to see the plant was in July, so by mid-September we would have to look for the basal rosettes. Our leader then instructed the group to spread out and penetrate a very extensive Blackberry and Dogwood tangle which underlies a hydro corridor. After about half an hour of quite fruitless searching we acquiesced to the Blackberry prickles. Some suggested that Monument Plant was a misnomer for this elusive species. At the very least the basal rosettes are not very hardy and had already succumbed to early frosts. Bill Crins then pointed out that it would be best to make a return visit to the area in July.

As a consolation we were taken to the only known Canadian station of Hoary Mountain Mint (*Pycnanthemum incanum*). This plant was collected in Burlington between 1873 and 1900. It was then thought to be extirpated in Ontario until 1981 when Bill Crins had the great satisfaction of rediscovering it in the same area. At the time of our visit there were only a dozen or so plants scattered about, although Bill thought it might actually have spread a bit since his last visit.

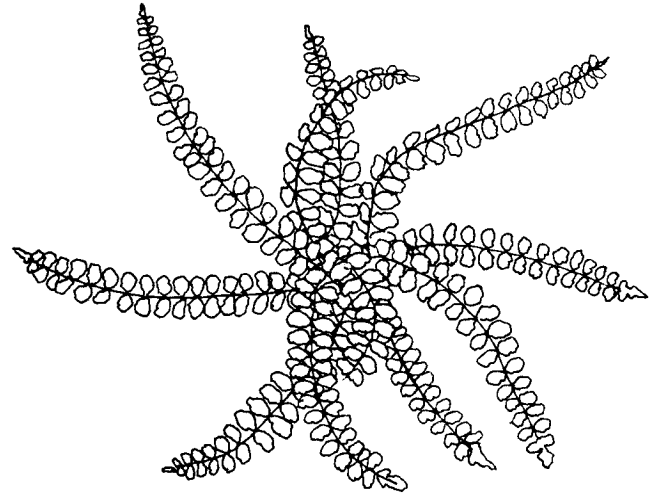
Our group was quite privileged to have the opportunity to visit four different botanical sites in Halton County. We had a delightful, adventurous day with many interesting botanical observations - all thanks to our leader, Bill Crins.

George Bryant

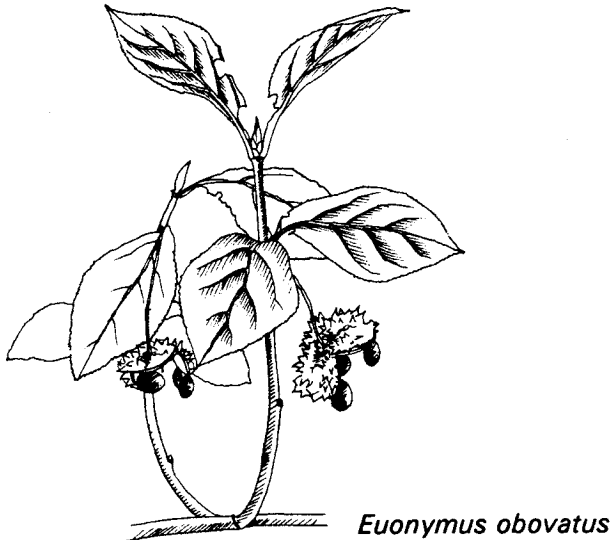
NASSAGAWEYA CANYON AND CRAWFORD LAKE

This field trip was part of the Annual General Meeting weekend and was led by Bill McIlveen on Saturday September 25, 1993.

Beside one of the ubiquitous gravel pits, indigenous to the escarpment area we spotted a robust stand of Mugwort (*Artemisia vulgaris*). The limestone-loving, and Carolinian, Running Strawberry Bush (*Euonymus obovatus*) made an attractive ground cover in the woods, while above it, the graceful, arching stems of Blue-stemmed Goldenrod (*Solidago caesia*) made a yellow rhythm along the path.

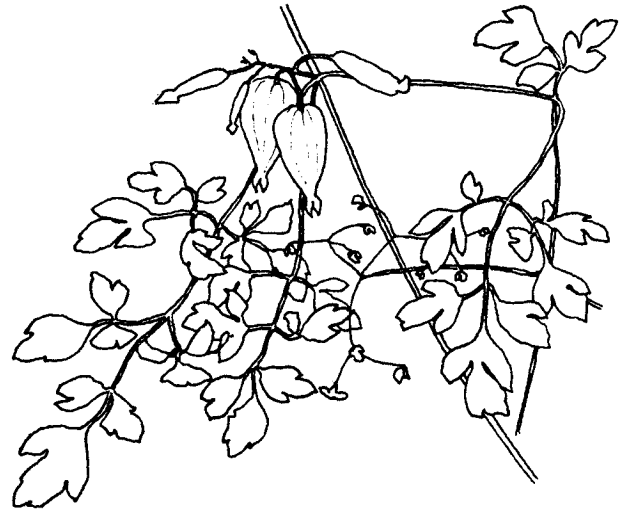


Asplenium trichomanes



Euonymus obovatus

Two spleenwort ferns, Maidenhair Spleenwort (*Asplenium trichomanes*) and Ebony Spleenwort (*A. platyneuron*), were fairly common in limestone crevices. Bill showed us the only specimen he knew of in Halton County of Climbing Fumitory (*Adlumia fungosa*).



Adlumia fungosa

Two plants of Tall Northern Green Orchid (*Platanthera hyperborea*) were seen along the trailside as well as Turtlehead (*Chelone glabra*) and Spikenard (*Aralia racemosa*). Beside Crawford Lake was a colony of Common Dodder (*Cuscuta gronovii*).

Rounding out the day's discoveries were Wood Frog (*Rana sylvatica*), Green Frog (*Rana clamitans*) and an Eastern Garter Snake (*Thamnophis sirtalis*) along the Margins of Crawford Lake.

Drawings by Irene McIlveen

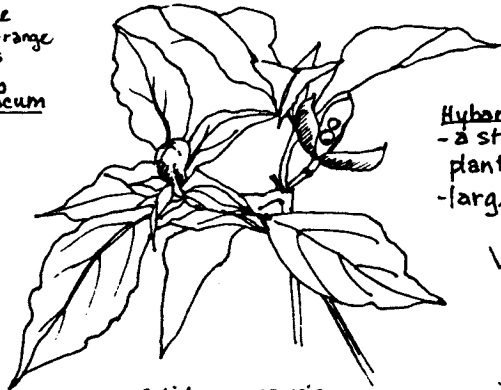
September 26, 1993 - Rock Chapel - RBG - Hamilton

- well used trail along top of escarpment and down along slope - especially popular in spring during maple syrup demos.

Notable species pointed out along the trail included -



fruit like fuzzy orange tomatoes
Triosteum aurantiacum



Hybanthus concolor
- a stand of robust plants, slightly hairy
- large seed pods.



Campanula americana

- close to its northern limit
- restricted here to the rocky talus slope.

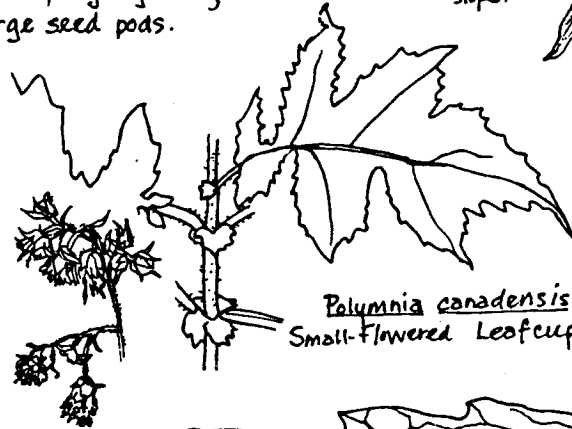


Tagetes minuta First found in RBG at Cootes Paradise - 10-15 yrs. ago

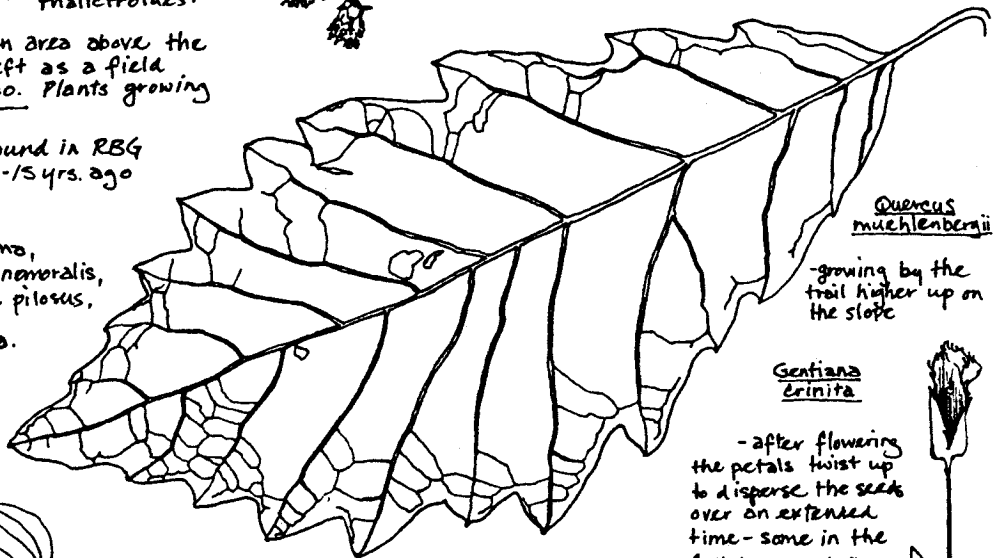
- also flowering -
Solidago altissima,
S. canadensis, S. nemoralis,
Aster ericoides, A. pilosus,
A. novae-angliae,
Verbascum Blatteria.

Part of the open area above the escarpment is left as a field succession demo. Plants growing here included -

Solidago caesia,
S. flexicaulis, Aster laevis,
A. sagittifolius were also flowering along trail.
- also noted - Menispermum canadense, Zonitoxylum americanum, large stands of Caulophyllum thalictroides.



Polunmia canadensis
Small-flowered Leafcup.



Quercus muehlenbergii

- growing by the trail higher up on the slope

Webster's Falls - Dandas
- trail along Spenser Creek below the falls over rocky terrain

Bright orange berries on Disporum lanuginosum



- after flowering the petals twist up to disperse the seeds over an extended time - some in the fall to germinate immediately; others kept until spring and summer.

Gentiana crinita



Penthorum sedoides

Ditch Stonecrop

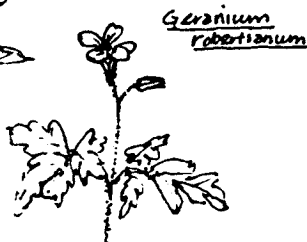


Comptosia rhizophyllus

- one of the ferns familiar to hikers of the Bruce trail.



Adiantum pedatum



Geranium robertianum

- Thanks to Dr. James Pringle for leading our group on this trip.

- Irene McIlveen

TORONTO'S LESLIE STREET SPIT

In spite of the several fancy names assigned to the man-made landfill site that juts out into Lake Ontario from the foot of Toronto's Leslie Street, naturalists continue to call it, simply, "The Spit". Our trip leader on October 2, 1993 has studied the ecology of the area almost since its beginning. Her knowledge of the Spit's botany is that of an oracle (*Oraclea higginsii*). Verna Higgins has been an indefatigable force in "The Friends of the Spit" - the organization that has taken a leading role in preserving the flora of the area. Verna is a professional botanist, on staff at the University of Toronto, so no one was better qualified to lead this outing.

Verna made it clear, as she addressed the 10 of us who showed up in the misty morning air, that this would be no cursory lark. We'd cover the area on foot, exploring all habitats - roadsides, wet meadows, monocultural microcosms, sandy strands and patches of gravelly fill. Verna diplomatically explained that when she said "mixed scrub" she meant the habitat - not us.

On botany outings, you're not supposed to look at birds (we've been told), but no one could ignore a noisy parrot that flew over our heads just as we started. Perhaps it was an omen of imminent exoticism?

Verna's leadership technique could well be described as thorough. On the Spit's peninsulas, imaginatively named D, C, B and A, we not only walked the sandy shorelines, and examined the wet meadows, but were led through brush and jungles with such properties of remoteness and impenetrability, that we'd not have been surprised if Robinson Crusoe had appeared, ragged and unshaven, asking us, "What are you doing here? This is Saturday." Come to think of it, I'll bet that was his parrot.

The first kilometre, along the paved roadway, featured 8 million Asters and 7 million Goldenrods. The experts descended on them. Whatever one botanist didn't know, someone else did. With Wayne McShayne, Bill McIlveen and Ilmar Talvila pronouncing their identities, we learned that the Asters included Rayless Aster (*Aster brachyactis*), Hairy Aster (*A. pilosus*) and Amethyst Aster (*A. x amethystinus*) a hybrid of *A. ericoides* x *novae-*

angliae. If those three experts didn't get the names first, there was a back-up cast of Karen Buschert, Doug Lockerey *et al.* to fill in. Goldenrods were identified as *Solidago altissima*, *S. canadensis*, *S. nemoralis* and *Euthamia graminifolia*.

In the wet meadows, we found a few Nodding Ladies'-tresses (*Spiranthes cernua*) and some Silverweed (*Potentilla anserina*) still in flower. Long past flowering, but in robust health, was a specimen of Showy Ladies'-slipper (*Cypripedium reginae*). Verna told us of a patch of Prickly Pear Cactus (*Opuntia* sp.), but we couldn't find it. You have to miss something.

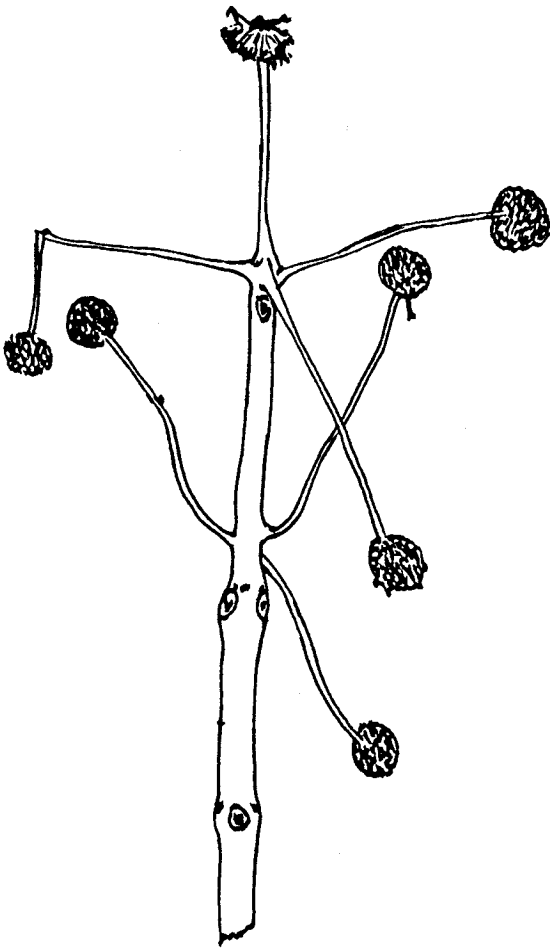
One of the most interesting items (we thought) was a monoculture resulting from the nesting of gulls on the Spit. Gulls' nests are packed in so tightly that, until the birds vacate, in July, no plants can grow. Then, on come a few species that can handle the situation - being capable of flourishing after such a late start and thriving in soil rife with *Larus* excrement. One such plant is Lamb's-quarters (*Chenopodium album*). You've likely seen a lot of these in your lifetime, but you can see ten times that many in just one look at this southern sector of the Spit. It was sensationally profuse. Two other items in this habitat were Redroot Pigweed (*Amaranthus retroflexus*) and Stinging Nettle (*Urtica dioica*).

In my enjoyment of this outing, I have a lot of people to thank. When we stopped for lunch at the Open Air Noshery and Fish-cleaning Emporium, I realized I was the only one with no lunch. So, thank you, Ilmar, for the cheese sandwich; and thank you, Verna, for the second cheese sandwich; and, thank you, whoever gave me the third cheese sandwich. And, thanks to Elaine McShayne for the cookies; and to Heather Mackey for laughing at my jokes; and to Valerie McShayne for finding the first *Spiranthes cernua*. Thanks also to Irene McIlveen for a copy of the guidelines for writing this review. (It's not her fault I didn't follow them very well.)

No one kept a complete list of plants. We were all too busy. Some others (not all in flower) included Eastern Black Nightshade (*Solanum ptycanthum*), a *Gaillardia* (no unanimity as to species; *G. aristata* and *G. pulchella* both got votes), Sand Dropseed

(*Sporobolus cryptandrus*), White Mulberry (*Morus alba*), Japanese Knotweed (*Polygonum cuspidatum*), Bugleweed (*Lycopus uniflorus*), Garden Loosestrife (*Lysimachia vulgaris*) and Mossy Stonecrop (*Sedum acre*). A fine representation of fungi went virtually unnoticed, maybe some other time... After five hours of concentrated Spit-inspection, a few of us decided to catch the 3 p.m. bus back to civilization. Someone guessed we'd walked 193 miles (310 km) although the more scientifically minded thought that might be a little high. Anyway, we left the intrepid survivors on the roadway, silhouetted against the lake and sky. As far as I know, they're probably still there.

Gerry Bennett



Cephalanthus occidentalis

RECENT PUBLICATION

RARE VASCULAR PLANTS IN THE CANADIAN ARCTIC

McJannet, C., G. Argus, S. Edlund and J. Cayotte, 1993. Rare vascular plants in the Canadian Arctic. Canadian Museum of Nature, Ottawa. 79 pp. \$14.92 (CAN) (includes postage, handling and GST).

This is the latest publication to emerge from the Canadian Rare Plants Project which is supported by the Research Division of the Canadian Museum of Nature. It compiles the rare vascular plants of the Canadian Arctic as part of the Canadian contribution to the International Circumpolar Agreement on the Conservation of Arctic Flora and Fauna.

The annotated list treats 236 rare vascular plant taxa in the Canadian Arctic, which includes portions of the Yukon Territory, Northwest Territories, Quebec, Ontario and Labrador. For each taxon a comment is included on phytogeography, occurrence in the Canadian Arctic and rare status in other parts of Canada. A distribution map for the Canadian Arctic is included for each species.

This publication is available in English from:

Direct Mail
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○○○ REVIEW ○○○

PLANT COMMUNITIES OF THE LESLIE STREET SPIT

Higgins, Verna J., Susan Denzel, and Nancy Fazari, 1992. Plant communities of the Leslie Street Spit: a beginner's guide. Friends of the Spit and Botany Conservation Group, Department of Botany, University of Toronto, Toronto, Ontario. 41 pp. (paper) Available from Dr. V. Higgins, Department of Botany, University of Toronto, 25 Willcocks Street, Toronto, Ontario M5S 3B2.

This booklet is intended to be an introduction to the plant communities of the Leslie Street Spit (Tommy Thompson Park) in eastern Toronto. Several previous publications have documented the vascular plant flora of this site since the mid-1970's, and this booklet carries on in that vein, in addition to providing descriptions of the plant communities. This succession of publications provides a historical record of changes on The Spit as it becomes modified and expanded by additional filling (construction waste and dredgeate), and as its vegetation changes through successional processes.

Since this publication is intended for the interested visitor to The Spit, it is a bit short on analysis. The community descriptions are basic, but appropriate for the intended audience. Eight community types are described. All of these are early successional communities, since The Spit is still less than 40 years old. Most of the communities are dominated by herbaceous or shrubby species, but there are also several woodlands dominated by Eastern Cottonwood (*Populus deltoides*) and other intolerant hardwoods. Each community is characterized with regard to soil types, moisture regimes, and dominant species. There is also a set of color photographs of the communities and some of the dominant species. Unfortunately, the quality of reproduction of the photographs is poor, so that I'm not sure how useful they will be to users of the booklet. Some of the photographs appear to have been overexposed, although that may have been an artefact of poor reproduction.

I would have liked to have seen some

interpretation of temporal floristic changes on The Spit. Some interesting analyses of comings and goings of species would have added a dimension to this publication, without detracting from its appeal to the target audience. The opportunity for such an analysis was missed here, but perhaps a botanist interested in phytogeography can pick up on this in the future.

In addition to the sections on vegetation, this booklet also contains brief chapters on winter botany and wildlife on The Spit. These are interesting innovations in a publication on plant communities. Curiously, although birds, mammals, and butterflies are mentioned, nothing is said about herpetofauna.

Almost half of this publication is devoted to the list of vascular plants that have been found on The Spit at one time or another. Over 380 species have been documented. The list is arranged alphabetically by genus and then species. There is no use of the family level. The authors felt that a listing by genus would be more user-friendly, particularly for beginners. Personally, I don't understand why this would be the case. It seems to me that a beginner would be less likely to know a genus than a family. In any case, the list is useful as a compilation. Each species has been categorized with regard to status and habitat on The Spit, and place of origin or floristic affinity. There have been some surprising occurrences on The Spit. For example, *Opuntia humifusa* has occurred, apparently spontaneously.

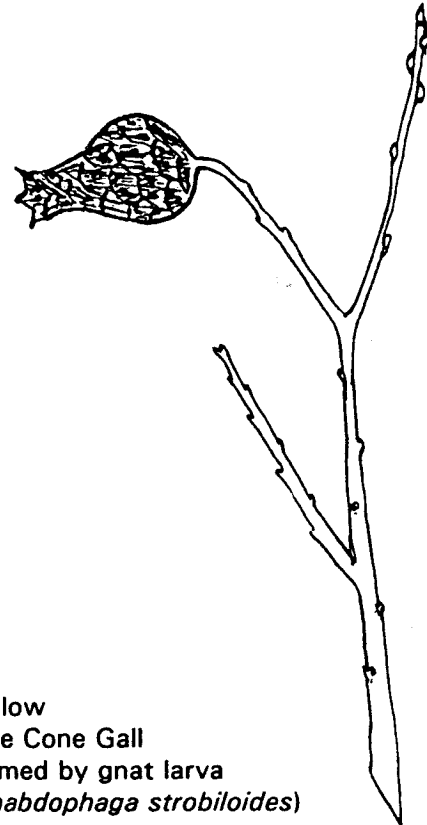
In most cases in this list, national, provincial, and regional rarity are duly noted. However, there is no mention of the significance of *Juncus secundus* (provincially rare), or *Veratrum viride* (unknown as a wild plant in Ontario).

One peculiar feature of the list is the use of the term "type genus". The concept of a "type genus" has a very definite meaning in botanical nomenclature, and it is misused in this publication.

It appears that the authors have used old floras as their nomenclatural sources. There are numerous examples of names that have long since been changed. Had the authors chosen to use a recent standard reference, such as "A

Checklist of the Flora of Ontario: Vascular Plants", by John Morton and Joan Venn (1990), they would have avoided the perpetuation of superseded names and outmoded generic concepts (e.g., *Alliaria officinalis* Andr. [= *A. petiolata* (M. Bieb.) Cavara & Grande]; *Gerardia tenuifolia* M. Vahl [= *Agalinis tenuifolia* (M. Vahl) Raf.]). Another problem that could have been avoided by the use of such a standard is the listing of synonyms as distinct taxa. Examples of this situation include *Conyza canadensis* (L.) Cronq. and *Erigeron canadensis* L.; *Salix cordata* Michx. var. *rigida* (Muhl.) Carey and *Salix rigida* Muhl. (which actually should be *Salix eriocephala* Michx.); and *Anacharis canadensis* (Michx.) Rich. and *Elodea canadensis* Michx. These problems aside, I think that this booklet should serve a useful purpose in educating visitors about the vegetation and plant life of The Spit. Nevertheless, there is room for improvement, especially with regard to nomenclature.

Bill Crins
Ministry of Natural Resources
Box 9000, Huntsville, Ontario POA 1K0



Willow
Pine Cone Gall
formed by gnat larva
(*Rhabdophaga strobiloides*)

RANGE EXTENSION NOTES

CONTRIBUTIONS TO RANGE EXTENSION NOTES

We encourage members to contribute reports to this section. The following basic information should be included in a range extension note:

1. Scientific, common and family name of the plant.
2. Precise location of the record.
3. Collection and herbarium information. In general, range extensions should be supported by a specimen deposited in a recognized institutional herbarium. In some cases an identifiable photograph deposited in an institutional herbarium will suffice.
4. Collection date.
5. Significance of the record, e.g. new county record, etc. A map can be used to show the new record(s) in relation to previous records of the species.
6. Notes: this can include remarks on identification, local abundance, habitat, etc.

***Geum laciniatum* and *Geum urbanum* (Rosaceae)
new to the District Municipality of Muskoka, Ontario**

William J. Crins

Ontario Ministry of Natural Resources, P. O. Box 9000, Huntsville, Ontario POA 1K0

Geum laciniatum Murray (Cut-leaved Avens) is relatively common in the lower Great Lakes (Lakes Erie and Ontario) counties of southern Ontario. However, it appears to be rare north of the southern tier of counties, and is very infrequent on the Precambrian Shield.

On 23 August 1992, several plants of *G. laciniatum* were found in a shallow seasonal creek bottomland about 30 m south of Hanes Rd., 0.5 km southwest of the Hwy. 60 by-pass in the Town of Huntsville. It was growing in the partial shade of Sugar Maple (*Acer saccharum*) and Black Ash (*Fraxinus nigra*), on mesic stony loam soil.

This is the first record for Muskoka D. M. (J. Goltz, pers. comm., 1993). The nearest known locations are in Simcoe County, along the North River near Georgian Bay, and along Lake Simcoe in Oro Township (Geomatics International 1990; A. A. Reznicek, pers. comm., 1990).

Specimen

Ontario, **MUSKOKA DISTRICT MUNICIPALITY**, Huntsville Town Municipality, Chaffey Twp., S. side of Hanes Rd., W. of North Rd., UTM 396219 (Map 31 E/6), 45° 20'N, 79° 13'W, 23 August 1992, W. J. Crins # 8966 (TRTE, MICH).

Geum urbanum L. (Common Avens) is an Eurasian alien that has become naturalized in ravines and other woodlands adjacent to inhabited areas in southern Ontario. It was first reported in Canada from New Brunswick (Hinds 1981), and was subsequently reported from Peel and York Counties in Ontario, and Washtenaw County in Michigan (McNeill 1981). It also occurs in Quebec, at least in the Quebec City area (Bernard and Gauthier 1986). Its frequent occurrence around sites formerly occupied by the British led Bernard and Gauthier (1986) to suggest that the species was brought over for use in gardens. Subsequently, it became well established, at least in parts of Quebec and Ontario.

On 6 July 1993, numerous plants of *G. urbanum* were discovered at the back of a floodplain terrace on the north side of the Big East River, east of Ravenscliff Rd., ca. 2 km northwest of Hwy. 11, in the Town of Huntsville. The population was growing in a thin layer of sand over clay, adjacent to a small stream traversing the terrace, under the dense shade of Eastern Hemlock (*Tsuga canadensis*).

This is the first record for Muskoka D.M. (J. Goltz, pers. comm., 1993), and a considerable extension northward from the areas in close proximity to Lake Ontario, where it is common.

Specimen

Ontario, **MUSKOKA DISTRICT MUNICIPALITY**, Huntsville Town Municipality, Chaffey Twp., N. side of Big East River, S. of Sinclair's Rd., E. of Ravenscliff Rd., UTM 373234 (Map 31 E/6), 45° 21'N, 79° 15'W, 6 July 1993, W.J. Crins # 9317 and V. Heron (TRTE, MICH).

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